

(PCT Article 36 and Rule 70)

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2005/002656

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1, 3-17 as originally filed/furnished
- pages* 2, 2/1 received by this Authority on 08.12.2005
- pages* _____ received by this Authority on _____
- ☒ the claims:
- nos. 2, 3 as originally filed/furnished
- nos.* _____ as amended (together with any statement) under Article 19
- nos.* 1 received by this Authority on 08.12.2005
- nos.* _____ received by this Authority on _____
- ☒ the drawings:
- sheets fig. 1-7 as originally filed/furnished
- sheets* _____ received by this Authority on _____
- sheets* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

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Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1.	Statement		
	Novelty (N)	Claims _____	YES
		Claims 1-3 _____	NO
	Inventive step (IS)	Claims _____	YES
		Claims 1-3 _____	NO
	Industrial applicability (IA)	Claims 1-3 _____	YES
		Claims _____	NO
2.	Citations and explanations (Rule 70.7)		
	<p>Document 1: JP 2003-161137 A (Toyota Motor Corp.), 06 June 2003, paragraphs [0015], [0016] and [0027] to [0033] (Family: none)</p> <p>Document 2: JP 2004-19498 A (Toyota Motor Corp.), 22 January 2004, paragraphs [0024] to [0028] & US 2004/0018123 A1 & EP 1371826 A2</p> <p>Document 3: JP 9-220423 A (Nippon Soken, Inc.), 26 August 1997, paragraphs [0010], [0011] and [0019] to [0022] (Family: none)</p> <p>Document 4: JP 2002-361047 A (Nissan Motor Co., Ltd.), 17 December 2002, paragraphs [0028] to [0031] and [0050] (Family: none)</p> <p><u>(1) Claim 1</u></p> <p>The invention set forth in claim 1 is disclosed or suggested by documents 1 to 3 cited in the international search report; therefore, the invention in question lacks novelty and does not involve an inventive step.</p> <p>The filter catalysts disclosed in documents 1 to 3 all comprise catalyst supporting base materials that have porosities and pore diameters within the ranges that are described as being suitable ranges in the present application. Furthermore, the filter catalysts disclosed</p>		

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Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
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in the abovementioned documents are coated with an oxide layer in a manner such that said oxide layer does not occlude the pores, and the methods for supporting said oxide layer upon the filter catalysts cannot be considered to be significantly different from the method that is employed in the present invention. Such being the case, it is likely that the filter catalysts disclosed in documents 1 to 3 will also have pores with a diameter of 1 to 20 μm and a porosity of 11% or higher after the formation of the oxide layer, like the invention set forth in the abovementioned claim.

In addition, the technique for forming a catalyst supporting layer from an oxide powder with particle diameters of 1 μm or less is well known in the technical field in question, as disclosed in document 1 and newly cited document 4. Consequently, it would have been easy for a person skilled in the art to conceive of using the catalyst supporting base materials from the inventions disclosed in documents 1 to 3 in order to produce filter catalysts which exhibit the pore characteristics that are set forth in the abovementioned claim. Furthermore, the present invention cannot be considered to exhibit superior filter characteristics as a result of configuring so that the filter catalysts have pore characteristics such as pore diameters of 1 to 20 μm and a porosity of 11% or higher, even after consideration of the disclosures in the description of the present application.

(2) Claims 2 and 3

The inventions set forth in claims 2 and 3 are either the same as the invention disclosed in document 1

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cited in the international search report, or would have been easy for a person skilled in the art to conceive of in the light of documents 1 to 3, which are cited in the international search report, and document 4, which is newly cited.

As indicated in section (1), it is likely that the invention disclosed in document 1 will provide a filter catalyst which exhibits the pore characteristics that are stipulated in the abovementioned claims.

In addition, document 1 and document 4 indicate that an oxide powder with particle diameters of 1 μm or smaller was used to form a catalyst supporting layer on the surfaces of the pores in a catalyst supporting base material. Furthermore, it is within the common creative abilities of a person skilled in the art to select an oxide powder with a grain size distribution such that the oxide powder will cover the surfaces on the interior of the pores in the catalyst supporting base material without occluding said pores (in other words, a grain size distribution that will not cause an increase in the pressure loss) when producing the filter catalysts disclosed in documents 1 to 4.